

1652

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/218,913B

DATE: 04/18/2001  
 TIME: 10:40:11

Input Set : A:\txt.98,736.Seq.Lst.2nd.Rev.txt  
 Output Set: N:\CRF3\04182001\I218913B.raw

3 <110> APPLICANT: Hall, Roderick L  
 4 Poll, Christopher T.  
 5 Newton, Benjamin B.  
 6 Taylor, William J.A.  
 8 <120> TITLE OF INVENTION: A Method for Accelerating the Rate of Mucociliary Clearance  
 W--> 9 <130> FILE REFERENCE: 98,736  
 11 <140> CURRENT APPLICATION NUMBER: 09/218,913B  
 12 <141> CURRENT FILING DATE: 1998-12-22  
 14 <160> NUMBER OF SEQ ID NOS: 71  
 16 <170> SOFTWARE: Microsoft Word 97  
 18 <210> SEQ ID NO: 1  
 19 <211> LENGTH: 179  
 20 <212> TYPE: PRT  
 21 <213> ORGANISM: Homo sapien  
 23 <400> SEQUENCE: 1  
 24 Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val  
 25 1 5 10 15  
 27 Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr  
 28 20 25 30  
 30 Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser  
 31 35 40 45  
 33 Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val  
 34 50 55 60  
 36 Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp  
 37 65 70 75 80  
 39 Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser  
 40 85 90 95  
 42 Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr  
 43 100 105 110  
 45 Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg  
 46 115 120 125  
 48 Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn  
 49 130 135 140  
 51 Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln  
 52 145 150 155 160  
 54 Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly  
 55 165 170 175  
 57 Ala Val Ser  
 60 <210> SEQ ID NO: 2  
 61 <211> LENGTH: 197  
 62 <212> TYPE: PRT  
 63 <213> ORGANISM: Homo sapien  
 65 <220> FEATURE:  
 66 <221> NAME/KEY: sig\_peptide  
 67 <222> LOCATION: 1..18  
 69 <400> SEQUENCE: 2  
 70 Ala Gly Ser Phe Leu Ala Trp Leu Gly Ser Leu Leu Ser Gly Val

ENTERED

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71 1 5 10 15  
 73 Leu Ala Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser  
 74 20 25 30  
 76 Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn  
 77 35 40 45  
 79 Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly  
 80 50 55 60  
 82 Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala  
 83 65 70 75 80  
 85 Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala  
 86 85 90 95  
 88 Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp  
 89 100 105 110  
 91 His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala  
 92 115 120 125  
 94 Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val  
 95 130 135 140  
 97 Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn  
 98 145 150 155 160  
 100 Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg  
 101 165 170 175  
 103 Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu  
 104 180 185 190  
 106 Ala Gly Ala Val Ser  
 107 195  
 109 <210> SEQ ID NO: 3  
 110 <211> LENGTH: 153  
 111 <212> TYPE: PRT  
 112 <213> ORGANISM: Homo sapien  
 114 <400> SEQUENCE: 3  
 115 Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala  
 116 1 5 10 15  
 118 Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu  
 119 20 25 30  
 121 Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys  
 122 35 40 45  
 124 Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr Gly  
 125 50 55 60  
 127 Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser Ala  
 128 65 70 75 80  
 130 Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr  
 131 85 90 95  
 133 Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser  
 134 100 105 110  
 136 Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe  
 137 115 120 125  
 139 Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu  
 140 130 135 140  
 142 Ala Cys Met Leu Arg Cys Phe Arg Gln

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Input Set : A:\txt.98,736.Seq.Lst.2nd.Rev.txt  
Output Set: N:\CRF3\04182001\I218913B.raw

143 145 150  
145 <210> SEQ ID NO: 4  
146 <211> LENGTH: 58  
147 <212> TYPE: PRT  
148 <213> ORGANISM: Homo sapien  
150 <400> SEQUENCE: 4  
151 Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala  
152 1 5 10 15  
154 Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu  
155 20 25 30  
157 Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys  
158 35 40 45  
160 Glu Glu Cys Leu Lys Lys Cys Ala Thr Val  
161 50 55  
163 <210> SEQ ID NO: 5  
164 <211> LENGTH: 51  
165 <212> TYPE: PRT  
166 <213> ORGANISM: Homo sapien  
168 <400> SEQUENCE: 5  
169 Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg  
170 1 5 10 15  
172 Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly  
173 20 25 30  
175 Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu  
176 35 40 45  
178 Lys Lys Cys  
179 50  
181 <210> SEQ ID NO: 6  
182 <211> LENGTH: 58  
183 <212> TYPE: PRT  
184 <213> ORGANISM: Homo sapien  
186 <400> SEQUENCE: 6  
187 Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala  
188 1 5 10 15  
190 Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn  
191 20 25 30  
193 Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu  
194 35 40 45  
196 Glu Ala Cys Met Leu Arg Cys Phe Arg Gln  
197 50 55  
199 <210> SEQ ID NO: 7  
200 <211> LENGTH: 51  
201 <212> TYPE: PRT  
202 <213> ORGANISM: Homo sapien  
204 <400> SEQUENCE: 7  
205 Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg  
206 1 5 10 15  
208 Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly  
209 20 25 30

## RAW SEQUENCE LISTING

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Input Set : A:\txt.98,736.Seq.Lst.2nd.Rev.txt  
Output Set: N:\CRF3\04182001\I218913B.raw

211 Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met  
 212 35 40 45  
 214 Leu Arg Cys  
 215 50  
 217 <210> SEQ ID NO: 8  
 218 <211> LENGTH: 92  
 219 <212> TYPE: PRT  
 220 <213> ORGANISM: Homo sapien  
 222 <400> SEQUENCE: 8  
 223 Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val  
 224 1 5 10 15  
 226 Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr  
 227 20 25 30  
 229 Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser  
 230 35 40 45  
 232 Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val  
 233 50 55 60  
 235 Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp  
 236 65 70 75 80  
 238 Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser  
 239 85 90  
 241 <210> SEQ ID NO: 9  
 242 <211> LENGTH: 708  
 243 <212> TYPE: DNA  
 244 <213> ORGANISM: Homo sapien  
 246 <220> FEATURE:  
 247 <221> NAME/KEY: misc\_feature  
 248 <222> LOCATION: 679..708  
 249 <223> OTHER INFORMATION: /note= "n at positions 622, 679, 707 is any nucleic acid"  
 251 <400> SEQUENCE: 9  
 252 ggccgggtc tttctcgccct ggctgggatc gctgctccct tctgggtcc tggcggccga 60  
 254 ccgagaacgc agcatccacg acttctgcct ggtgtcgaag gtgggtggca gatgccgggc 120  
 256 ctccatgcct aggtgggtgt acaatgtcac tgacggatcc tgccagctgt ttgtgtatgg 180  
 258 gggctgtgac ggaaacagca ataattacct gaccaaggag gagtcctca agaaatgtgc 240  
 260 cactgtcaca gagaatgcca cgggtgaccc ggccaccaggc aggaatgcag cggattcctc 300  
 262 tgtcccaagt gctcccaagaa ggcaggattc tgaagaccac tccagcgata tgttcaacta 360  
 264 tgaagaatac tgcaccgcca acgcagtca tgggccttgc cgtgcattct tcccacgctg 420  
 266 gtactttgac gtggagagga actcctgc aaacttcatc tatggaggt gccggggcaa 480  
 268 taagaacagc taccgctctg aggaggcctg catgtccgc tgcttccgcc agcaggagaa 540  
 270 tcctccctg ccccttggct caaaggtgtt ggttctggcc ggggctgttt cgtatggtg 600  
 272 ttgatccccc ttctggggag cttccatggt cttactgtt ccgggtggca aggaggaacc 660  
 274 aggagcgtgc cctgcccanc gtctggagct tcggagatga caagggn 708  
 276 <210> SEQ ID NO: 10  
 277 <211> LENGTH: 235  
 278 <212> TYPE: PRT  
 279 <213> ORGANISM: Homo sapien  
 281 <220> FEATURE:  
 282 <221> NAME/KEY: peptide  
 283 <222> LOCATION: 1..235

RAW SEQUENCE LISTING  
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Input Set : A:\txt.98,736.Seq.Lst.2nd.Rev.txt  
Output Set: N:\CRF3\04182001\I218913B.raw

284 <223> OTHER INFORMATION: /note= "Xaa at positions 198, 201, 226, and 233 are unknown  
285 amino acids"  
287 <400> SEQUENCE: 10  
288 Ala Gly Ser Phe Leu Ala Trp Leu Gly Ser Leu Leu Ser Gly Val  
289 1 5 10 15  
291 Leu Ala Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser  
292 20 25 30  
294 Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn  
295 35 40 45  
297 Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly  
298 50 55 60  
300 Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala  
301 65 70 75 80  
303 Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala  
304 85 90 95  
306 Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp  
307 100 105 110  
309 His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala  
310 115 120 125  
312 Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val  
313 130 135 140  
315 Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn  
316 145 150 155 160  
318 Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg  
319 165 170 175  
321 Gin Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu  
322 180 185 190  
W-1> 324 Ala Gly Ala Val Ser Xaa Trp Cys Xaa Ser Phe Ser Trp Gly Ala Ser  
325 195 200 205  
327 Met Val Leu Leu Ile Pro Gly Gly Lys Glu Glu Pro Gly Ala Cys Pro  
328 210 215 220  
W-> 330 Ala Xaa Arg Leu Glu Leu Arg Arg Xaa Gln Gly  
331 225 230 235  
333 <210> SEQ ID NO: 11  
334 <211> LENGTH: 179  
335 <212> TYPE: PRT  
336 <213> ORGANISM: Homo sapien  
338 <220> FEATURE:  
339 <221> NAME/KEY: peptide  
340 <222> LOCATION: 1..170  
341 <223> OTHER INFORMATION: /note= "Xaa at positions 8, 17, 19, 21-26, 40, 42, 45-47,  
52, 64,  
342 103, 112, 114, 116-121, 135, 137, 140-142, 147, and 159 is any  
343 amino acid residue"  
345 <400> SEQUENCE: 11  
W--> 346 Ala Asp Arg Glu Arg Ser Ile Xaa Asp Phe Cys Leu Val Ser Lys Val  
347 1 5 10 15  
W--> 349 Xaa Gly Xaa Cys Xaa Xaa Xaa Xaa Xaa Trp Trp Tyr Asn Val Thr  
350 20 25 30  
W--> 352 Asp Gly Ser Cys Gln Leu Phe Xaa Tyr Xaa Gly Cys Xaa Xaa Ser

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/218,913B

DATE: 04/18/2001

TIME: 10:40:12

Input Set : A:\txt.98,736.Seq.Lst.2nd.Rev.txt  
Output Set: N:\CRF3\04182001\I218913B.raw

L:9 M:283 W: Missing Blank Line separator, <130> field identifier  
L:272 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:274 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:324 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
L:330 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
L:346 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:349 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:352 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:355 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:370 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:373 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:419 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:427 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:13  
L:456 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:459 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:462 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:490 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:492 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:505 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:529 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:532 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:535 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:549 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:576 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17  
L:586 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17  
L:588 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17  
L:598 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:18  
L:992 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:45  
L:1099 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:47  
L:1206 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:49